DOCUMENT RESUME

ED 078 060 TM 002 877

AUTHOR Campbell, David P.
TITLE The SVIB M-F Scale: Must We Ignore Feminine Aversions for Carburetors?
PUB DATE Sep 72
NOTE 14p.; Paper presented at a symposium of the American Psychological Association (Honolulu, Hawaii, September 1972)

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS Attitudes; Classification; Females; Individual Differences; Males; *Rating Scales; *Sex Differences; Speeches; *Test Interpretation; *Vocational Interests

ABSTRACT

There are substantial differences in the interests of men and women, reflected by their answers to vocational interest inventories. These differences are not trivial; they persist even in samples of men and women selected for occupational equivalence. The content of the sex differences is diverse. Lumping these differences together into one empirical scoring scale and labeling it "masculinity/femininity" creates more interpretative problems than it solves. The best way to proceed now is to stop using M-F scales and concentrate instead on homogeneous scales -- such as scales for mechanical interests and artistic interests -- so that, for example, a person with strong mechanical interests and weak artistic interests can be described exactly that way with no implication that this pattern connotes masculinity. (Author/CK)

The SVIB M-F Scale: Must we ignore feminine aversions for carburetors?*

David P. Campbell
University of Minnesota

News Item: A New Ulm, Minnesota mother was trying to fix her lawnmower. As she was trying to find the lever onto which to hook the speed control wire, her 8-year-old daughter happened by and asked what she was looking for. "The governor", the woman said. After a puzzled pause, the daughter asked, "How do you think he got in there?"

Minneapolis Tribune, July 5, 1972

I am going to discuss M-F scales from the viewpoint of vocational interests. I would like to make four main points:

First, there are substantial differences in the interests of men and women, reflected by their answers to vocational interest inventories. These differences are not trivial, they persist even in samples of men and women selected for occupational equivalence, and to ignore them would be misleading.

Second, the content of the differences between men and women is diverse and not easy to summarize. While there are some major themes -- men have stronger mechanical interests, women stronger artistic interests -- still, there are many other contrasts that don't fit into neat categories.

Third, lumping these differences together into one empirical scoring scale and labeling it "Masculinity-Femininity" creates more interpretative problems than it solves, especially as these labels have so much surplus meaning.

Fourth, we should stop using M-F scales and concentrate instead on homogeneous scales so that, for example, a person with strong mechanical interests and weak artistic interests can be described in exactly that way without implying that this pattern connotes masculinity.

* Paper presented in a Symposium on Masculinity-Femininity Scales, American Psychological Association, Honolulu, September, 1972.

Because this topic is so emotion-laden, I would like to stay close to the data; let me begin by showing you some statistics on M-F differences. These were taken from samples tested with the SVIB; as you know, in this inventory, the person is given a long list of occupations or occupational activities, and asked to respond "Like", "Indifferent", or "Dislike" to each of them. The responses can be analyzed by tallying the percent response to each choice for each item, and comparing these percentages across samples. Experience has taught us that differences greater than 18-20 % are important.

INSERT TABLE 1 ABOUT HERE

The second page of the handout, Table 1, gives data for the item, "Adjust a carburetor" for several samples. The first is an eighth grade class from a typical suburban school; the boys reported much more attraction than the girls for carburetors, which is fascinating as only a few students of either sex at this age have more than a vague idea of what a carburetor is.

The second sample, a ninth grade class drawn from a more rural school, shows an even greater difference between the sexes.

The third sample includes 45 married couples, and the differential attraction for carburetors is again obvious.

At the bottom of the page are listed the response percentages to this item for several samples of Men-In-General, which are the samples used to establish the base rate popularity of items. Interestingly, for the last 30 years, the carburetor item has split the male population roughly into thirds. No comparable data for Women-In-General are available because this item has never appeared on the women's form, a flaw that will be corrected next year when the new combined version of the Strong will appear, suitable for either sex.

INSERT TABLE 2 ABOUT HERE

However, the response percentages for both sexes are available for a similar item "Operating Machinery"; they are shown in Table 2. Again, the sex differential is obvious; roughly half of the men, compared with a quarter of the women, answered "Like" to this item.

INSERT TABLE 3 ABOUT HERE

The male-female difference in mechanical interests is even more vividly shown in the next table -- Table 3 -- which has the distribution of "Like" percentages to the item "Operating Machinery" for over 300 occupational samples. Male samples are designated by X's, female samples by O's. Although the distributions overlap, the separation between the sexes is obvious and this isn't even one of the best M-F items.

The samples with the highest and lowest percentages for each sex are listed at the top of the table, and make interesting scanning.

This table, incidentally, is a good illustration of the way that interest inventory items spread occupations out over wide ranges -- for this item, from 4 to 97 percent.

Most of these statistics are from individuals in "typical" sex roles; that is, the differences between the sexes may be due mainly to cultural pressure, and they might disappear if we could compare men and women who have made equivalent

career choices. In an attempt to do this, 17 pairs of samples of men and women from the same occupation have been selected; that is, one pair of samples is male and female artists, another pair is male and female life insurance sales personnel, another pair is male and female psychologists, and so forth. These samples, collected in 1967-69 for the restandardization of the Strong Blank, are large -- usually 200 or 300 of each sex -- and well selected; every individual has had at least three years of experience, each one reported that they liked their job, and wherever appropriate, all had the necessary degree or certification in their field.

These samples can be used to see if the contrasts in interests between men and woman disappear when the samples are drawn from the same occupations. There are three possibilities:

1. Men and women in the same occupations have the same interests.
2. They have different interests, and the differences are specific to each occupation.
3. They have different interests, and the differences are constant across all occupations.

INSERT TABLE 4 ABOUT HERE

To study this point, all SVIB items showing a 20 percent or greater difference between Men and Women-In-General are listed here. For the most part, these constitute the SVIB M-F scale. These items show large response differences between men and women at large; the question here is whether these differences also appear between men and women in the same occupation.

The numbers in the table show the percentage difference between the occupational samples in the response "Like" to that item. For example, the first line of numbers shows the difference between men and women in the "Like" response to the item "Decorate a room with flowers". The first column shows the MIG-WIG comparison, a whopping 61 percent. The top line reports the analogous figure for male and female artists, bankers, and so forth. The last column shows the average difference for this item across these samples. The first and last columns are the important ones for they show the comparison between men and women-in-general, and men and women when occupation is held constant. There is a lot of data in this table, which stretches over two pages, and you may want to study it more closely, at your leisure.

With a very few exceptions, which are not included in this table, the differences in interests between men and women are constant across all occupations; no occupation is free of these differences, nor does any occupation studied here have any novel pattern of differences between men and women that does not appear in any other occupation.

This finding has several important implications: first, these data demonstrate that the M-F difference does not go away when one controls for occupation tested.

Second, obviously, sex cannot be ignored in norming interest inventories. The differences are real, they can be identified empirically, and to ignore them would introduce error variance in the system.

Third, the content of the differences is not spread all over the domain of interests; they tend to be concentrated in artistic activities, favored by women, and mechanical activities, favored by men. There are other lesser themes, but these are the main two.

Fourth, a final implication comes from trying to understand the bigger picture of men, women and occupations. With these basic differences, can we expect men and women to enter all jobs in equal numbers? I think not. In the foreseeable future, for example, there will be fewer women than men who like to monkey around with carburetors. Those women who wish to should be allowed to -- most emphatically there should be no artificial barriers in their way to equal employment -- but most will not want to and companies who hire lots of carburator repairmen shouldn't be faulted simply because their work force is not 50-50, men-women.

The information presented thus far has focused mainly on the extreme cases in the SVIB items; now I would like to show you some data that more accurately represent the general situation across several areas of interest.

I have taken advantage of John Holland's occupational classification theory for this; he believes the world is divided up into six types of people: Realistic, such as farmers and engineers; Investigative, mainly scientists; Artistic, artists and musicians; Social, social workers and teachers; Enterprising, mainly salesmen; Conventional, such as bookkeepers and accountants.

INSERT TABLE 5 ABOUT HERE

One item from each of these areas is listed in Table 5 with the L-I-D percentages for the Men and Women-in-General samples. A quick scan of these data shows that the size of the differences between the sexes varies over these content areas. The men show a slight but insignificant edge in the Realistic area and a mild edge in the Investigative area. The women are substantially higher in the Artistic and Social areas and the sexes are roughly equal in the

Enterprising and Conventional areas, though women report more distaste for managing an office.

These data provide a more accurate picture of the nature and size of the M-F differences. Again, they clearly exist, and they are not trivial. Still, to describe them as M-F differences -- as opposed to, say, artistic interests -- confuses the issues, especially at this point in history. (My wife incidentally interprets these data as showing men are occupationally rigid, and in need of Liberation. Says she, "Women answer 'Like' almost as often as men in all these areas, and much more often in a couple. Obviously men are not as willing to consider the wide range of possibilities.")

As I mentioned earlier, within the next year, a new version of the Strong will appear, designed for both men and women.. There will be some substantial changes on the profile, one of them being the elimination of the M-F scale which -- in the measurement of interests -- has outlived its usefulness, if indeed it ever had any.

HANDOUT

The SVIB Masculinity-Femininity Scale: Must we ignore feminine aversions for carburetors?*

David P. Campbell
University of Minnesota

ABSTRACT

There are substantial differences in the interests of men and women, reflected by their answers to vocational interest inventories. These differences are not trivial, they persist even in samples of men and women selected for occupational equivalence, and to ignore them would be to introduce considerable error into the scoring of these inventories.

The content of the sex differences is diverse and not easy to summarize. While there are some major themes -- men have stronger mechanical interests, women artistic erests -- there are many other contrasts that don't fit into neat categories.

Lumping these differences together into one empirical scoring scale and labeling it "Masculinity-Femininity" creates more interpretative problems than it solves, especially as these labels have so much surplus meaning.

The best way to proceed now is to stop using M-F scales and concentrate instead on homogeneous scales -- such as scales for mechanical interests and artistic interests -- so that, for example, a person with strong mechanical interests and weak artistic interests can be described in exactly that way with no implication that this pattern connotes masculinity.

* Handout for a paper presented in a Symposium on Masculinity-Femininity Scales, American Psychological Association, Honolulu, September, 1972.

Table 1

Response Percentages to the Item: "Adjust a Carburetor"

Eighth Grade Class

Response	Males (N = 70)	Females (N = 65)	Difference
Like	31 %	9 %	+ 22
Indifferent	30	11	+ 19
Dislike	39	80	- 41
	100 %	100 %	

Ninth Grade Class

Response	Males (N = 91)	Females (N = 108)	Difference
Like	51 %	12 %	+ 39
Indifferent	26	23	+ 3
Dislike	23	65	- 42
	100 %	100 %	

Married Couples (N = 45)

Response	Males	Females	Difference
Like	32 %	9 %	+ 23
Indifferent	38	17	+ 21
Dislike	30	74	- 44
	100 %	100 %	

Men-In-General

Response	1938	1966	1969
Like	33 %	35 %	34 %
Indifferent	35	36	34
Dislike	32	29	32
	100 %	100 %	100 %

Table 2

Response Percentages of Men- versus Women-In-General to the Item:

"Operating Machinery"

Response	Men-In-General 1938 Sample	Women-In-General 1946 Sample	Difference
Like	54 %	27 %	+ 27
Indifferent	26	34	- 8
Dislike	20	39	- 19

Response	1969 Sample	1969 Sample	
Like	42 %	26 %	+ 16
Indifferent	34	32	+ 2
Dislike	24	41	- 18

Table 3

Percent "Like" Responses to the item "Operating Machinery" for 311 Occupational Samples

Highest Female Samples		Highest Male Samples	
Sewing Machine Operators	59 %	Farmers - Minnesota	97 %
Math-Science Teachers	59 %	Farmers - North Dakota	95 %
Instrument Assemblers	57 %	Tool and Die Makers	93 %
Radiologic Technologists	52 %	Machinists	92 %
College Physical Education Teachers	49 %	Vocational Agriculture Teachers	86 %
Lowest Female Samples		**Lowest Male Samples**	
Directors, Christian Education	4 %	National Institute of Art Members	5 %
Interior Decorators	9 %	College Football Coaches	8 %
Lawyers	10 %	Pulitzer Prize Winners	12 %
Life Insurance Saleswomen	10 %	Life Insurance Salesmen	13 %
Fashion Models	10 %	Political Scientists	15 %

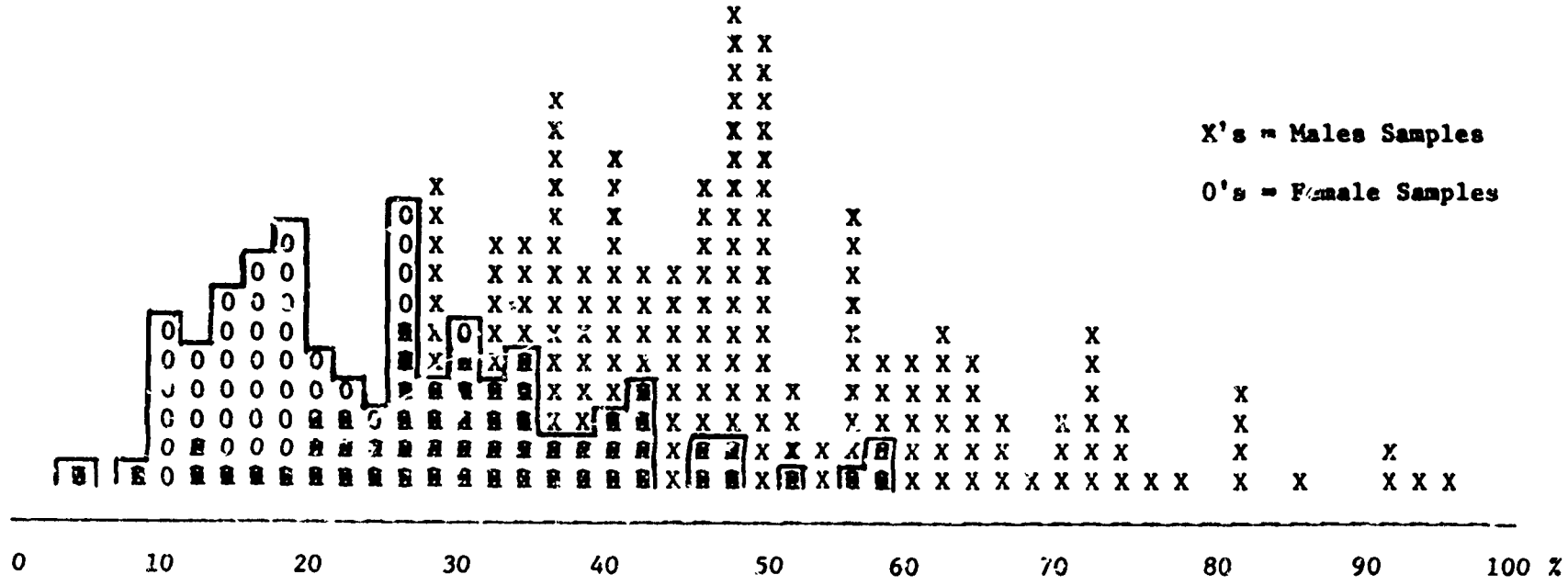

Table 4

SVIB Items Showing Large Differences Between Men and Women

Occupational Samples: Percent Difference "Like" Responses, Women Versus Men

Items Favored by Women	MIG vs WIG	Artists	Bankers	Chemists	English Teachers	Interior Decorators	Lawyers	Life Insurance Sales	Mathematicians	Math-Science Teachers	Medical Technologists	News Reporters	Psychologists	Social Science Teachers	Physicians	AVERAGE
Decorate a room with flowers	61	49	64	55	57	23	54	62	43	59	55	66	59	62	58	55
Interior decorator	47	37	48	35	43	(2)	43	46	23	35	41	54	45	48	40	41
Work with babies	28	15	34	19	19	33	12	35	36	19	12	19	18	18	13	22
Religious music	27	20	38	27	19	16	29	19	12	29	14	25	20	27	28	23
Magazines about art and music	27	(9)	31	22	23	11	11	22	16	21	21	29	28	37	26	24
Private secretary	26	(3)	51	11	27	(0)	20	37	16	34	12	18	22	28	16	22
Plan a large party	26	22	22	22	24	17	24	22	19	23	(7)	33	18	29	11	21
Work with ballet dancers	25	17	29	13	25	18	23	38	19	19	23	28	25	28	25	24
Interpreter	25	10	25	25	22	13	29	19	18	18	15	27	24	29	15	21
Art galleries	24	(5)	25	21	22	(6)	32	36	23	24	20	24	20	44	18	23
Poetry	24	11	25	31	18	30	18	40	11	26	19	16	28	39	20	25
Work with very old people	24	(5)	29	11	17	21	13	38	22	18	16	17	12	10	(6)	17
Play the piano	24	(9)	20	17	13	[4]	16	16	(3)	22	22	15	13	38	12	15
Formal dress affairs	23	19	27	12	16	12	20	26	13	16	10	23	20	24	10	18
Buyer of merchandise	23	12	31	(6)	22	10	27	(8)	(4)	23	(6)	25	10	10	15	15
Regular hours for work	22	23	30	11	31	(8)	10	12	22	35	24	12	10	26	10	19
Study modern languages	22	17	23	26	16	15	27	32	29	30	18	15	24	33	20	23
Travel bureau manager	21	(6)	33	(7)	14	16	17	13	9	20	18	21	(9)	(7)	10	14
Study literature	21	(8)	21	27	(4)	11	14	38	16	24	24	(5)	13	31	13	18
Artist	21	(2)	17	12	11	10	14	31	(4)	13	16	18	21	24	10	14
Librarian	20	(3)	28	17	29	10	17	24	19	33	16	12	9	45	17	20
Give first aid assistance	20	18	21	26	(9)	12	10	20	14	9	[5]	15	12	(1)	[9]	11
Study Bible history	20	22	24	21	13	24	14	14	21	14	(8)	15	(8)	15	14	16
Average	26	15	30	21	21	14	22	29	18	25	18	23	20	28	17	

___ = Entries over 20%
( ) = Under 10%
[ ] = Reversals

Table 4 (Cont'd)

SVIB Items Showing Large Differences Between Men and Women

Occupational Samples: Percent Difference "Like" Responses, Men Versus Women

Items Favored by Men	MIG vs. WIG	Artists	Bankers	Chemists	English Teachers	Interior Decorators	Lawyers	Life Insurance Sales	Mathematicians	Math-Science Teachers	Medical Technologists	News Reporters	Psychologists	Social Science Teachers	Physicians	AVERAGE
Travel alone	38	31	42	28	46	29	40	31	30	49	35	40	27	41	42	36
Popular mechanics magazines	33	25	25	18	36	20	29	28	11	24	29	30	24	40	25	26
Repair electrical wiring	29	20	33	17	39	21	24	33	17	34	28	24	27	31	25	27
State governor	25	21	24	13	30	10	18	19	27	32	32	30	12	25	25	23
Airplane pilot	25	32	34	12	22	13	19	30	14	35	13	18	19	25	19	22
Study physics	24	(9)	24	(1)	25	(8)	12	18	(0)	[4]	10	27	(6)	21	14	12
Electronics technician	23	30	13	14	30	14	19	11	17	24	20	17	18	27	29	20
Make statistical charts	21	19	15	(5)	23	24	22	29	(1)	14	23	29	8	18	17	18
Express judgements openly	22	20	24	21	19	19	17	18	26	29	27	19	11	26	31	22
Study calculus	21	13	11	(1)	15	(7)	8	10	[1]	11	(3)	14	(7)	9	11	8
Judge	20	22	17	12	24	10	(4)	17	9	20	32	29	(6)	16	16	17
Work for yourself	20	(5)	28	[2]	(7)	[2]	28	(9)	12	17	14	[2]	(5)	(9)	15	10
Average	25	21	24	12	26	14	20	21	15	24	22	23	14	24	22	

___ = Entries over 20%
( ) = Under 10%
[ ] = Reversals

Table 5

Men- versus Women-In-General Responses to

Holland's Occupational Types

Holland Type and Representative Item	Response	Men-In-General (1969, N = 1000)	Women-In-General (1969, N = 1000)	Difference
Realistic				
"Farmer"	Like	33 %	26 %	+ 7
	Indifferent	33	29	+ 4
	Dislike	34	45	- 11
		100 %	100 %	
Investigative				
"Scientific Research Worker"	Like	42 %	32 %	+ 10
	Indifferent	32	30	+ 2
	Dislike	26	38	- 12
		100 %	100 %	
Artistic				
"Artist"	Like	41 %	62 %	- 21
	Indifferent	34	22	+ 12
	Dislike	25	16	+ 9
		100 %	100 %	
Social				
"Social Worker"	Like	26 %	45 %	- 19
	Indifferent	34	30	+ 4
	Dislike	40	25	+ 15
		100 %	100 %	
Enterprising				
"Sales Manager"	Like	24 %	28 %	- 4
	Indifferent	34	35	- 1
	Dislike	42	37	+ 5
		100 %	100 %	
Conventional				
"Office Manager"	Like	26 %	25 %	+ 1
	Indifferent	42	29	+ 13
	Dislike	32	46	- 14
		100 %	100 %	